



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0814; Project Identifier AD-2022-00205-A]

RIN 2120-AA64

Airworthiness Directives; Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland Inc.) Model DHC-2 Mk. I airplanes with Supplemental Type Certificate (STC) No.

SA01324CH installed. This proposed AD was prompted by a report of damage in the main wing spar. This proposed AD would require inspecting the wing structure for damage (drill starts, corrosion, cracks, and improperly installed fasteners), repairing damage and reporting the inspection results if necessary. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Wipaire, Inc., 1700 Henry Avenue, South Saint Paul, MN 55075; phone: (651) 414-4460; email: bkutz@wipaire.com; website: www.wipaire.com. You may view this service information at the Airworthiness Products Section, Operational Safety Branch, FAA, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0814; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Dirk Dodge, Aviation Safety Engineer, Chicago ACO Branch, FAA, 2300 E. Devon Avenue, Des Plaines, IL 60018; phone: (847) 294-7135; email: Dirk.Dodge@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0814; Project Identifier AD-2022-00205-A” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Dirk Dodge, Aviation Safety Engineer, Chicago ACO Branch, FAA, 2300 E. Devon Avenue, Des Plaines, IL 60018. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA received a report that during an annual inspection of a Viking Air Limited Model DHC-2 Mk. I airplane, a gap was noted between the doubler and wing near station 42.5, requiring partial removal of the doubler and removal of the sealant between the doubler and the wing skin. Further inspection of the internal wing structure of that area with a borescope found damage in the forward spar caused by a drill during initial installation of the doubler. The doubler was installed as part of Wipaire, Inc., STC No. SA01324CH. Inspection of the rest of the operator's fleet of airplanes with STC No. SA01324CH installed found a total of 6 out of 14 wings with drill start damage in the same area. Later inspections on these same airplanes on the outboard end of the doubler installation revealed improperly installed fasteners. As only a small fraction of the affected fleet has been inspected, the possible extent of damage in the field is unknown. Accordingly, the FAA determined that in addition to inspecting for drill starts and improperly installed fasteners, inspecting for corrosion and cracks is necessary. Damage of the main structural members of the wing could adversely affect the structural integrity of the airplane and could result in loss of control of the airplane.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information

The FAA reviewed a Wipaire, Inc., letter, dated September 7, 2021. This letter requests that operators inspect the front wing spar (strap) and front (forward) spar aft flange for drill holes due to the installation of the top wing strap installed using Wipaire, Inc., Drawing 5D1-790, which is an attachment to the letter. This letter also requests reporting all findings of damage to Wipaire, Inc.

Proposed AD Requirements in this NPRM

This proposed AD would require inspecting the wing structure (spar cap, spar flange, and stringers) for damage (drill starts, corrosion, cracks, and improperly installed fasteners), repairing damage if necessary, and reporting certain inspection results.

Differences Between this Proposed AD and the Service Information

The Wipaire, Inc., letter, dated September 7, 2021, specifies inspecting the front spar and front spar aft flange between wing stations 42.5 and 56. This proposed AD would require inspecting all airplane structure under the installed doubler between wing stations 30.26 and 126.36.

Impact on Intrastate Aviation in Alaska

Airplanes modified by Wipaire, Inc., STC No. SA01324CH are often used to transport cargo and supplies to remote areas of Alaska. The FAA estimates that roughly half of the U.S.-registered airplanes modified by STC No. SA01324CH are operating in Alaska. Since damage to the main structural members of the wing could result in loss of the airplane wing and therefore, loss of control of the airplane, the FAA has determined that the need to correct the unsafe conditions outweighs any impact on aviation in Alaska.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 96 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per airplane	Cost on U.S. operators
Inspection	6 work-hours x \$85 per hour = \$510	Not applicable	\$510	\$48,960

The FAA estimates the following costs to do any necessary repairs that would be required based on the results of the proposed inspection. The agency has no way of determining the number of airplanes that might need these repairs.

On-condition costs

Action	Labor Cost	Parts Cost	Cost per airplane
Repair damage	100 work-hours x \$85 per hour = \$8,500	\$35,000	\$43,500
Report inspection results	1 work-hour x \$85 per hour = \$85	Not applicable	\$85

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866, and
- (2) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland Inc.): Docket No. FAA-2022-0814; Project Identifier AD-2022-00205-A.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland Inc.) Model DHC-2 Mk. I airplanes, all serial numbers, certificated in any category, with Supplemental Type Certificate (STC) No. SA01324CH installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 5711, Wing Spar.

(e) Unsafe Condition

This AD was prompted by a report of damage in the main wing spar. The FAA is issuing this AD to detect and address damage (drill starts, corrosion, cracks, and improperly installed fasteners) to the main structural members of the wing. This condition, if not addressed, could adversely affect the structural integrity of the airplane and result in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Actions

Within 12 months after the effective date of this AD, using a borescope, flashlight and mirror or equivalent, visually inspect the aircraft structure under the installed doubler between wing stations 30.26 and 126.36 for drill starts, corrosion, cracks, and improperly installed fasteners. Pay particular attention to the spar cap, spar flange, and stringers, and include all structural items in the wing. If there is a drill start, any corrosion, a crack, or an improperly installed fastener, before further flight, repair using a method approved by

the Manager, Chicago ACO Branch, FAA. For a repair method to be approved by the Manager, Chicago ACO Branch, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

Note 1 to paragraph (g): Wipaire, Inc., letter, dated September 7, 2021, provides additional information on this subject, including examples of damage.

(h) Reporting Requirement

If, during the inspection required by paragraph (g) of this AD, any damage is found, within 30 days after doing the inspection or within 30 days after the effective date of this AD, whichever occurs later, report the following information to the person identified in paragraph (k)(1) of this AD:

(1) Name and address of owner.

(2) Date of the inspection.

(3) Name, address, telephone number, and email address of person submitting the report.

(4) Airplane serial number, registration number, STC installation date, and total hours time-in-service on the airplane at the time of the inspection.

(5) Description of damage. Include affected structure, location, dimensions, and photos of damage (or sketches, if photos are not possible).

(i) Special Flight Permit

Special flight permits are prohibited.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Chicago ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

(1) For more information about this AD, contact Dirk Dodge, Aviation Safety Engineer, Chicago ACO Branch, FAA, 2300 E. Devon Avenue, Des Plaines, IL 60018; phone: (847) 294-7135; email: Dirk.Dodge@faa.gov.

(2) For service information identified in this AD, contact Wipaire, Inc., 1700 Henry Avenue, South Saint Paul, MN 55075; phone: (651) 414-4460; email: bkutz@wipaire.com; website: www.wipaire.com. You may view this referenced service information at the Airworthiness Products Section, Operational Safety Branch, FAA, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

Issued on July 1, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-14429 Filed: 7/7/2022 8:45 am; Publication Date: 7/8/2022]